137825

Facility name: MANUILLE SITE
Location: WACKEGAN, ILLINOIS
ERA Region: I
Person(s) in charge of the facility: Norm NIEDERGANG, ON-SCENE
COORDINATOR
Name of Reviewer. Ner IN NIEDERGANG Date: AUG. 12, 1982.
General description of the facility:  (For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)
LANDFILL BORDERING LAKE MICHIGAN ON
MANVILLE PROPERTY INTO WHICH IS PLACED
BOTH FRIABLE AND CONSCLIDATED ASBESTOS
AND OTHER MANUFACTURING WASTES, THE
LANDFILL HAS BEEN IN USE SINCE ABOUT
1920.
2021 15 - 460 S = 02. S = /626)
Scores: $S_M = 38.31 (S_{gw} = 4.69 S_{sw} = 9.70 S_2 = 65.36)$ $S_{FF} = 0$
S <sub>DC</sub> = 37.50

FIGURE 1 HRS COVER SHEET

Ground Water Route Work Sheet									
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)				
Observed Release	6 45	1	0	45	3.1				
If observed release is giv	en a score of 45, proceed to line 4 en a score of 0, proceed to line 2.					].1			
2 Route Characteristics Depth to Aquifer of	0 1 2 3	2	6	6	3.2				
Concern Net Precipitation Permeability of the	0 ① 2 3 0 1 2 ③	1	1 3	<b>3</b> 3					
Unsaturated Zone Physical State	0 1 ② 3	1	2	3					
	Total Route Characteristics Score		12	15					
3 Containment	0 1 2 ③	1	3	3	3.3				
Waste Characteristics Toxicity/Persistence Hazardous Waste Quantity	0 3 6 9 12 15 18 0 1 2 3 4 5 6 7 6	B 1	18 8	18 8	3.4				
	Total Waste Characteristics Scor	e	26	26	<u> </u>				
5 Targets Ground Water Use Distance to Nearest Well/Population Served	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	3	30	9 40	3.5				
	Total Targels Score		3	49					
6 If line 1 is 45, multiple 1 is 0, multiple 1	tiply 1 × 4 × 5 ply 2 × 3 × 4 × 5		28.0	E 57,30	30				
	7,330 and multiply by 100	Sg	w= 4	.89					

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet										
Rating Factor	Assigned (Circle C	Value One)	Multi- plier	Score	Max. Score	Ref. (Section)				
1 Observed Release	(i)	45	.1	0	45	4.1				
If observed release is given a value of 45, proceed to line 4.  If observed release is given a value of 0, proceed to line 2.										
If observed release is give	a value of pro-			<del> </del>		4.2				
Route Characteristics Facility Slope and Interv	ening (0) 1 2	3	1	0	3					
Terrain	0 1 ②	3 (3)	1 2	2	3 6	•				
Distance to Nearest Sur Water Physical State	0 1 2	0	1	2	3					
,	Total Route Cha	racteristics Score		10	15					
3 Containment	012	3	1	2	3	4.3				
Waste Characteristics Toxicity/Persistence Hazardous Waste Quantity	0 3 6 0 1 2	9 12 15 18 3 4 5 6 7	<ul><li>1</li><li>1</li></ul>	18 8	18 8	<b>4.</b> 4				
	Total Waste Ch	naracteristics Sco	re	26	25	·				
5 Targets Surface Water Use Distance to a Sensiti Environment Population Served/D to Water Intake Downstream	0 1 ve 0 1	② 3 2 ③ 6 8 10	3 2	6 . 6		4.5				
	Total T	argets Score		17	2 5	5				
6 If line 1 is 45, multi		5 4 x 5		έz	40 64.	250				
Divide line 6 by 64		oy 100 ·	Ss	w = 0	7.70	· .				

FIGURE 7 SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet											
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)						
1 Observed Release	0 (45)	1	45	45	5.1						
Date and Location: 4/28	182 UPWIND, MIDSITE	AND	DOWN	WIND	,						
Sampling Protocol: 8-1	HR SAMPLES COLLECT ATIONS ON 37 IMM IMPLYSED BY ELECTION O. Enter on line 5.	MCE P	AT M SILTER	130VE 125, 71	4EN						
If line 1 is 0, the Sa = If line 1 is 45, then pr	oceed to line 2.				· .						
Waste Characteristics Reactivity and		1	0	3	5.2						
Incompatibility Toxicity Hazardous Waste Quantity	0 1 2 3 4 5 6 7	8 1	98	9 8							
·	Total Waste Characteristics Scot	re	17	20							
3 Targets Population Within	0 9 12 15 18 (21) 24 27 30	1	21	<b>30</b> .	5.3						
4-Mile Radius Distance to Sensitive Environment Land Use	0 1 2 3	1	6	6 3	••						
	. •				••						
				•							
	Total Targets Score		30	39							
Multiply 1 x 2 x	3		2295	50 35,10	0						
E Divide line 4 by 35,	100 and multiply by 100	Sa	- 65.	38							

FIGURE 9 AIR ROUTE WORK SHEET

:

	s	S <sup>2</sup>
Groundwater Route Score (Sgw)	4.89	<i>23</i> .9/
Surface Water Route Score (S <sub>SW</sub> )	9.70	94.09
Air Route Score (Sa)	65,38	4274.54
$s_{gw}^2 + s_{sw}^2 + s_a^2$		4392.54
$\sqrt{s_{gw}^2 + s_{sw}^2 + s_a^2}$		66.28
$\sqrt{s_{gw}^2 + s_{sw}^2 + s_a^2} / 1.73 = s_M =$		38.31

FIGURE 10 WORKSHEET FOR COMPUTING  $s_{M}$ 

		Fire a	na	EXP	105	1011	VVC	rk She	: <del></del>				
	Rating Factor		Assigned Value (Circle One)			Multi- plier	Score	Max. Score	Ref. (Section)				
1	Containment	1					3			1		3	7.1
2	Waste Characteristics											:	7.2
	Direct Evidence	0			3					1		3	
	Ignitability	0		2	3				-	1		3	•
	Reactivity		1							1		3	
	Incompatibility Hazardous Waste Ouantity	0	1	2		4	5	6 7	8	1		3 8	
	-	Total Was	ste	Cha	arac	teri	istic	s Sco	e			20	
<u></u>										<del></del>	<u>!</u>	L	
3	•	-	1	^	3	,	5			1		E	7.3
	Distance to Nearest Population	υ	,	2	3	4	5			. 1		5	
	Distance to Nearest.	0	1	2	3					1		3	
	Building												
	Distance to Sensitive	0	1	2	3		•			1		3	
	Environment			_	_							•	
	Land Use Population Within	0		2		A	5			1		3 5	
	2-Mile Radius	U	•	~	J	7	3			•		`	
	Buildings Within 2-Mile Radius	0	1	2	3	4	5			1		5	•
												•	
	•												
												•	
													••
											÷		
	<del> </del>									<del></del>	<del></del>	T	1
		T	otal	Ta	rge	ts S	cor	e				24	
4	Multiply 1 x 2 x 3											1,440	
5	Divide line 4 by 1,440 a									SFE -	<del></del>	<del></del>	<del></del>

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

	·.	Direct Contact Work Sheet				
	Rating Factor	Assigned Value (Circle One)	Hotti- plier	Score	Max. Score	Ref. (Section)
0	Observed Incident	0 45	1	. 0	45	8.1
	If line 1 is 45, proceed  If line 1 is 0, proceed to					
2	Accessibility	0 1 2 3	1	: 3	3	8.2
3	Containment	0 (15)	1	15	15	8.3
	Waste Characteristics Toxicity	0 1 2 3	5	15	15	8.4
<u></u>	Targets  Population Within a 1-Mile Radius Distance to a Critical Habitat	0 1 2 3 4 5	4	12	20 12	8.5
		Total Targets Score		12	32	
6	If line 1 is 45, multiply If line 1 is 0, multiply			8100	21,600	· .
7	Divide line 6 by 21,600		SDC -	37.5	<u></u>	

FIGÜRE 12 DIRECT CONTACT WORK SHEET

# DOCUMENTATION RECORDS FOR HAZARD RANKING SYSTEM

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: JOHN'S - MANVILLE

LOCATION: WALKEGAN ILLINOIS (51)2 SEC 10 R45N T23E)

NOTE:

THE WASTE DISPOSAL AREA IS LOCATED ON AN AREA WHICH HAS BEEN BUILT UP BY WASTES \* ACCUMULATING SINCE ABOUT 1920 TO A HEIGHT OF APPROXIMATELY 50 to 60 FT. ABOVE THE NATURAL GROUND EURFACE. THEREFORE ANY CITED REFERENCE WHICH DISCUSSES "LANDFILL" OR "LANDFILLED AREA" IS ACTUALLY REFERING TO THE AREA' WHICH HAS BEEN FILLED FROM THE NATURAL GROUND SURFACE UP TO A HEIGHT OF 50 TO GOFT. TO THE BEST OF MY ESTIMATION, NO LANDFILLING HAS EVER OCCURED BELOW THE NATURAL GROUND SURFACE. THERE FORE A MORE CORRECT WAY TO DESCRIBE THE METHOD OF DISPOSAL AT THIS SITE IS "WASTE PILE" FURTHERMORE CURRENT DISPOSAL OF FRIABLE ASBESTOS OCCURS IN AN EXCAUNTED PIT ABOUT 150 FT. IN PINHETER AND APPROXIMATELY 50 FT DEEP : FROM THE TOP OF THE BUILT OF AREA TO THE NATURAL GROUND SURFACE.

### GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

- NO DOCUMENTED

RELEASE -

Rationale for attributing the contaminants to the facility:

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

GROWDWATER DISCHARGE ZONE (C-50 FEET BELOW NATURAL GROW'S TURFACE)

(LETTER FROM TLLINGIS STATE GEOLOGICAL SURVEY TO ROBERT WENGROW DATED 2/23/78.)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

TOP OF THE ZONE OF SATURATION IS AT OR NEAR THE NATURAL GROUND SURFACE.

( SEE LETTER REFERENCED ABOVE)

Depth from the ground surface to the lowest point of waste disposal/storage:

LOWEST FORT OF WASTE DISPOSAL STORAGE IS AT THE NATURAL GROUND SURFACE (SEE PI. OF THIS FORM FOR FURTHER EXPLAINATION)

## Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

MEAN ANNUAL PRECIPITATION = 32 INCHES

(FROM THE MODEL)

Mean annual lake or seasonal evaporation (list months for seasonal):

MEAN ANNUAL EVAPORATION = 30 INCHES

( FROM THE MODEL)

Net precipitation (subtract the above figures):

NET PRECIPITATION = +2 INCHES

## Permeability of Unsaturated Zone

Soil type in unsaturated zone:

SURFRIAL BEACH SAND WHICH IS DENSE AND MEDIUM GENNED.

(FROM: LETTER FROM ILLINOIS STATE GEOLOGICAL EXCUSEY TO ROBERT Permeability associated with soil type: WENGROW DATED 2123/76)

> 10-3 cm/sec.

( FROM THE MODEL AND FREEZE & CHERRY, 1979, GROUNDINATER.)

## Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

FINE MATERIAL (ASBESTOS)

(ICPA DIVISION FILE MEHO FROM MARY SCHROLDER DATED 1/13/82

#### 3 CONTAINMENT

#### Containment

Method(s) of waste or leachate containment evaluated:

(SEE P 1 OF THIS FORM FOR FURTHER EXPLAINATION OF WASTE NANAGEHENT METHOD (HOSEN) Method with highest score:

SINCE THE BUILT OF AREA IS NIKELY TO CONTAIN FRIABLE ASSESSING WASTE AS WELL AS CONSOLIDATED ASPESTOS WASTE MATERIAL (FROM EARLY WASTE DISPOSAL TECHNIQUES) AND THE PILES ARE NOT TOWERE WITH AN APPROPRIATE COVER MATERIAL (IE-PARTIEM) AND NO LINER REPORTEDLY EXISTS (I EPA DIVISION FILE HEMO FROM HARY SCHROED WASTE CHARACTERISTICS DATED 218160) - THIS WOULD RATE A (3)

## Toxicity and Persistence

Compound(s) evaluated:

FRIABLE ASBESTOS

( MEHO · CITED NEOVE)

Compound with highest score:

FRIABLE ASBESTOS: TOXICITY - SAX LEVEL 3
PERSISTENCE -> HIGHLY PERSISTENT; LEVEL 3

## Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

(SEE ATTACHED MEMO)

Basis of estimating and/or computing waste quantity:

(SEE ATTACHED MEMO)

#### 5 TARGETS

#### Ground Water Use

Use(s) of equifer(s) of concern within a 3-mile radius of the facility:

NOT USED, TOUT USABLE

(LETTER FROM ISBS TO BOKERT WENDROW DATED 2/23/78)

## Distance to Nearest Well

Location of nearest well drawing from <u>aquifer of concern</u> or occupied building not served by a public water supply:

NONE

(LETTER CITED ACOVE)

Distance to above well or building:

- NOT APPLICABLE -

## Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

NONE

(TOROGRAPHIC MAP; CITY OF WAVEGAN PUBLIC WORKS)

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

NONE

Total population served by ground water within a 3-mile radius:

NONE

#### SURFACE WATER ROUTE

#### 1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

一 2000円

Rationale for attributing the contaminants to the facility:

DOCUMENTED -

#### 2 ROUTE CHARACTERISTICS

## Facility Slope and Intervening Terrain 🛠

Average slope of facility in percent:

VARIES CONSIDERABLY HOWEVER, SLOPE FROM TOPOS SITE TO NATURAL GROUND LEVE L 15 > E96.

(ON-SITE INSPECTICA OBSERVATIONS BY ECOLOGY & CHAIRDHEUT, INC-EIT PICTURES INCLUDED Name/description of nearest downslope surface water:

LAKE MICHIGAN

Average slope of terrain between facility and above-cited surface water body in percent:

~ 15H/800 TO 1000FT = 1.5% TO 1.9% SLOPE

(ON-SITE INSPECTION) OBSERVATIONS BY ECOLOGY & CHAIRONMENT, INC - FIT AND TOPO HAP HEADDENENT)

Is the facility located either totally or partially in surface water?

NO

(CN-SITE INSTECTION BY ECOLOGY; ENVIRONMENT, INC (FIT))

Is the facility completely surrounded by areas of higher elevation? NO

## 1-Year 24-Hour Rainfall in Inches

BETWEEN 2.0 TO 2.5 INCHES

(FROM MODEL)

## Distance to Nearest Downslope Surface Water

<1000 FT.

MEASUREMENT FROM TOPO HAP)

## Physical State of Waste

FINE MATERIAL (FRIABLE ASBESTOS)

(SEE P. 3 OF THIS FORM FOR REFERENCE)

3 CONTAINMENT

#### Containment

Method(s) of waste or leachate containment evaluated:

WASTE PUES

(SEE P.1 OF THIS FORM FUR FURTHER EXPLAINATION OF WASTE MANAGEMENT METHOD CHOSEN)

Method with highest score:

SINCE THE EDICT UP AREA IS LIKELY TO CONTAIN FRIABLE
ASSESTOS WASTE AS WELL AS CONSOCIOATED ASSESTOS
WASTE HATERIAL (FROM EARLY WASTE DISPOSAL TECHNIQUES
AND THE PILES ARE NOT COVERED WITH AN
APPROPRIATE COVER MATERIAL (ie-EARTHEN MATERIAL
AND THE CONTAINMENT | DIVERSION SYSTEM IS POTENTIAL
WISSUND (INADEQUATE COVER OF BUILT UP AREA) - THIS
WOULD RATE A (2).

(IEPA LETTER FROM JOE PETRILLI TO J-M CORP. PATED 11/9/77
AND
7

#### 4 WASTE CHARACTERISTICS

## Toxicity and Persistence

Compound(s) evaluated
FRIABLE
ASBESTOS

- SEE PHOF THIS FORM \_

Compound with highest score:

FRIABLE ASBESTOS

## Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

## UNKNOWN

Basis of estimating and/or computing waste quantity:

- SEE P. 4 OF THIS FORM -

5 TARGETS

### Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

RECREATION - FISHING, BOATING, SWIMMING, ELC

. Is there tidal influence?

- NOT A PPLICABLE -

## Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

-NOT APPLICABLE -

Distance to 5-acre (minimum) fresh-water wetland, if I mile or less:

WETLANDS IMMEDIATELY ADJACENT TO SITE (LTOFT.)

( TOPO MAP - WAUCEGAN OUAD)

Distance to critical habitat of an endangered species or national wildlife refuge, if I mile or less:

NONE KNOWN

## Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

NONE

NOTE: INTAKE LOCATED SEC. 22, THON, R23E IS ONLY
USED 1-2 DAYS A YEAR AND ACCORDING TO
THEREFORE
BOO BARTHOLOGIEW (FIT) ISANOT REPRESENTATIVE
OF THE WATER SUPPLIED TO THE POPULATION ON
A DAY-TO-DAY BASIS.

INTAKES SERVING THE POPULATION ARE WELL OUTSIDE THE 1-MILE PERSCRIBED PADIOS (STATIC WATER BODY)

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

NONE

Total population served:

NONE

Name/description of nearest of above water bodies:

LAKE MICHIGAN

Distance to above-cited intakes, measured in street miles.

SURFACE WATER

INTAKE LOCATED JUST ONER 4 MILES DOWNSTREAM

(DIDECT MENERSEMENT - TOPO MAP, WAUKEGAN GUAD)

1 OBSERVED RELEASE

Contaminants detected:

ASBESTOS

Date and location of detection of contaminants

4 28 82 UPWIND, MIDSITE, AND DOWNWIND SAMPLES

Methods used to detect the contaminants:

8-HOUR SAMPLES COURCTED AT ABONE LOCATIONS ON 37 MM.

MCE FILTERS THEN MALYZED (FIBER COUNT) BY ELECTRON MICROSCOPSY.

Rationale for attributing the contaminants to the site:

CHOWN ASBESTOS DISPOSAL SITE AND NATURE OF SAMPLE COLLECTION METHOD.

2 WASTE CHARACTERISTICS :

Reactivity and Incompatibility

Most reactive compound:

ASBESTOS -> "O" (NFPA)

Most incompatible pair of compounds:

NO INCOMPATIBLE PAIRS

## Toxicity

Most toxic compound: .

FRIARIE ASPESTOS

## Hazardous Waste Quantity

Total quantity of hazardous waste:

UNKNOUN

Basis of estimating and/or computing waste quantity:

(SEE ATTACHED MEMO)

#### TARGETS

### Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi

0 to 1 mi

0 to 1/2 mi

0 to 1/4 mi

CITY OF WAUKEGAN ALONE 15 67, 653 FEORE ACCORDING TO THE 1980 CENSUS WHICH MAX'S THE POPULATION IN THIS RADIUS. (SHALLER PADIUS! EXCLUSE THE MAJOR POPULATION AREAS AND WOULD RESULT IN AN OVERALL LOWER SCORE.)

- FROM TOPO MAD 1000 COND. - FROM TOPO HAP - WAUCCEAN OND. AND

Distance to a Sensitive Environment

, CITY OF WAUKEGAN FLANNING PEPT. -

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

NOT APPLICABLE

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

SEE p. 9 OF THIS FORM

Distance to critical habitat of an endangered species, if I mile or less:

NONE KNOWN

## Land Use

Distance to commercial/industrial area, if I mile or less:

INDUSTRIAL AREA ADJACENT (L'14 MILE)

(ACRIAL PHOTO'S; TOPO HAP-WAUKEGAN OUTO)

Distance to national or state park, forest, or wildlife reserve, if 2 \_\_\_\_\_ miles or less:

ILLINDIS BEACH STATE PARE ADJACENT ( 2114 HILE)

(TOPO MAP - WAUKECLN GUAD)

Distance to residential area, if 2 miles or less:

RESIDENTIAL AREA (14-1/2 MILE)

(TOPO MAP - WAUKEDAN OURD)

Distance to agricultural land in production within past 5 years, if I mile or less:

NONE

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

NONE

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

MONE

DIRECT CONTACT

TWODIEN GENERAL

- NONE DOCUMENTED -

ACCE 551 BILITY ACCOUND SITE POCES NOT EXTEND ALONG THAT ENTIRE ENSITY ENDE ACOUND SITE POCES NOT EXTEND ALONG THAT ENTIRE ENSITY ENDE.

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WASE CHASACTECIS - TOXICITY

TRIABLE ASBESTOS -+ SAX LEVEL 3

(TERMATION CON TERM) ASSA MISTECIONI D. (2010AS BIIM-1) WOTAXGOT (TERMINES CONTINED DI COLOR BIINATIONI DI COLOR BIIM-1) WOTAXGOT CAMPONOT (2'OTOPPE) AISTA HOST)

DISTÁNCE TO A CEITICAL HABITAT:

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cograph By:

Don Woods F5-8203-2-03 tate- Illums MITRE

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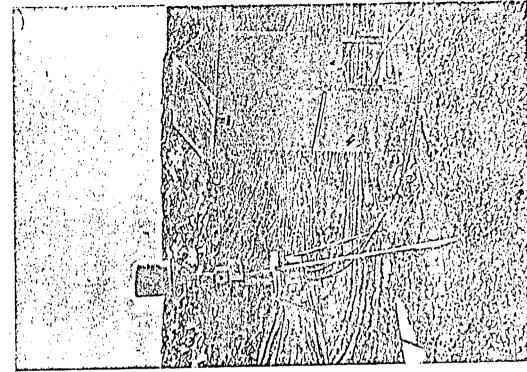
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nts: Thotograph taken

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Hillol Sauglea Right (John Mansvills)



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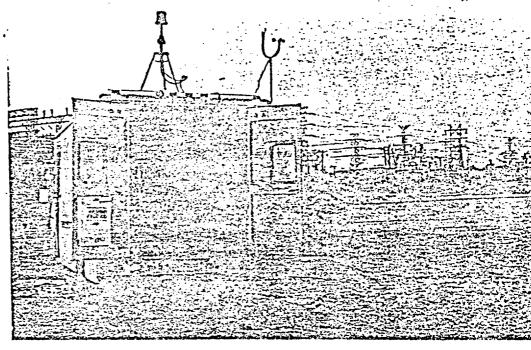
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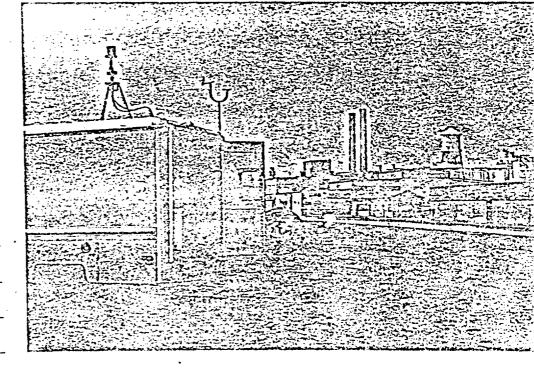
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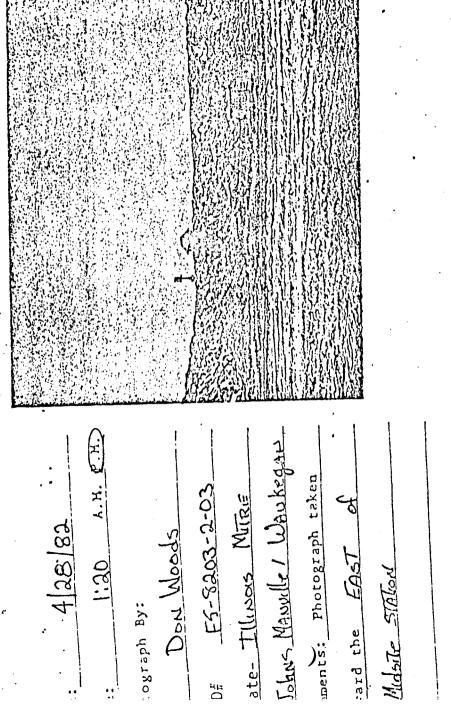
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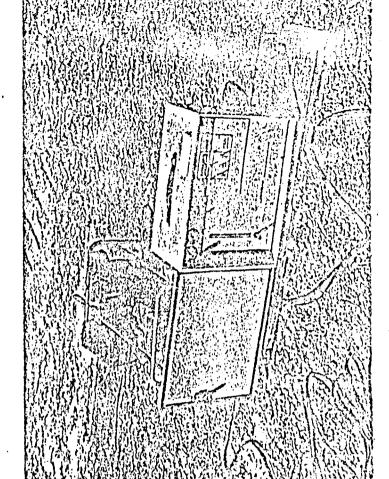
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DON Woods

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Dents: Photograph taken

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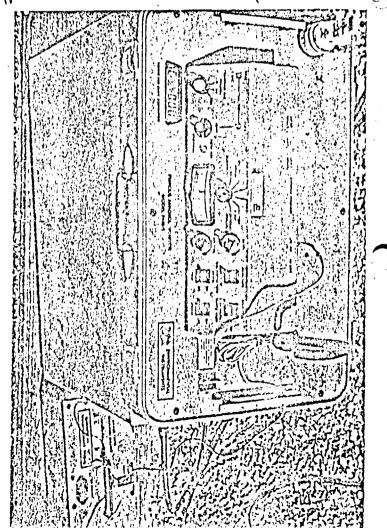
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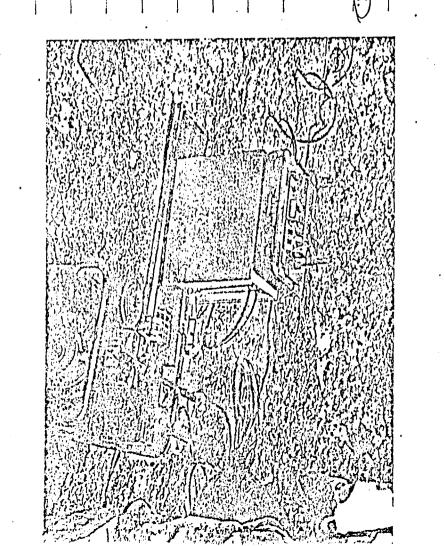
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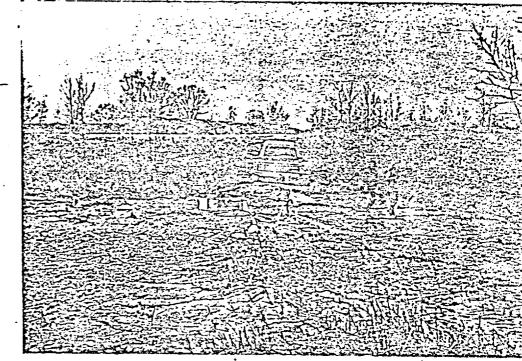
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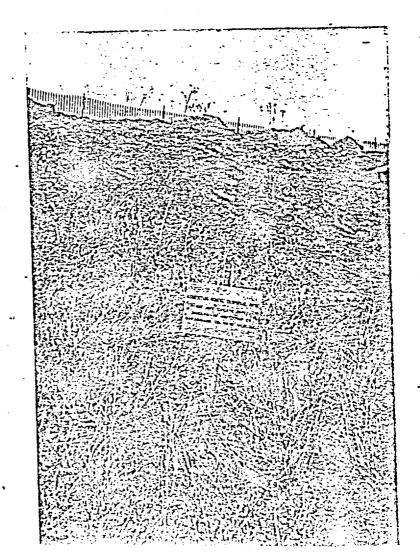
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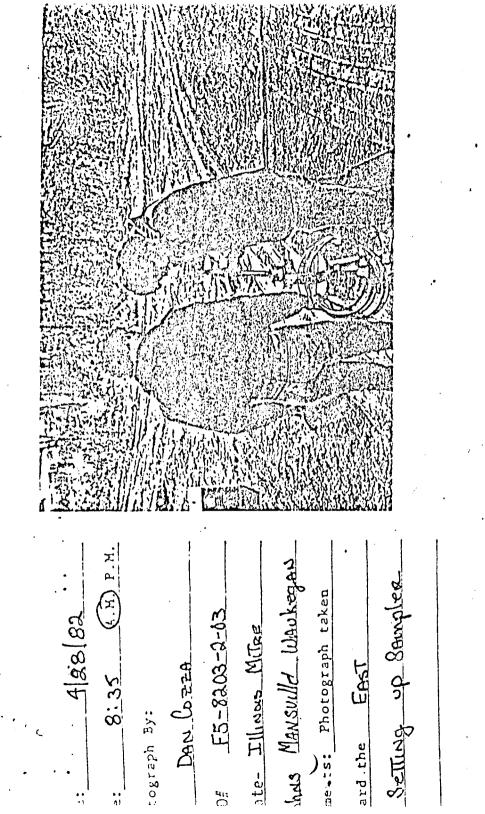




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otograph By:
Don Woods
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late- Illinois
Tohns Manswill Wankegan
nment: Photograph taken
and the West
up WIND STATION
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Don Woods
DD# <u>F5-8203-2-03</u>
itate- Illinos Mitaz.
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várd the North
•







83	A. H. (P. H.)
4 28	0.5
.	• 1

cograph by:

Dow Woods

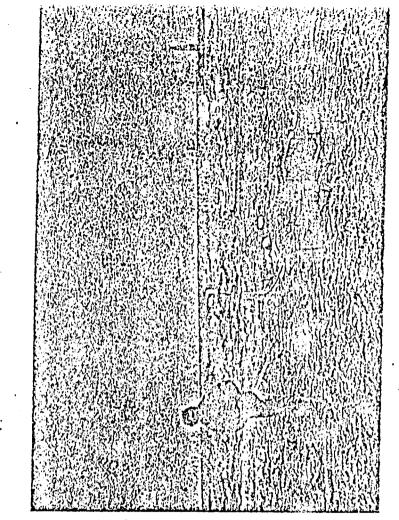
10# E5-8203-2-03

tate- Illinois Mitre

hus D'Answille/ Whykezen

ments: Photograph taken

upwind STATION



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE: 1 2 AUG 1982

SUBJECT: Calculation of Waste Volume for Manville Site, Waukegan, Illinois

FROM: Norman Niedergang

Environmental Engineer

TO: File

Three alternative techniques have been used to calculate the waste quantity at the above subject site:

 Landfill capacity (per the facility Part A RCRA Permit Application)

=600 ac: ft. =96,800 cu. yd.

This would score an 8 by the HRS.

Waste generation volume (per the facility Part A RCRA Permit Application)

= 5 tons/yr. X 60 yrs. = 300 tons

This would score a 5 by the HRS.

3. Wastepile volume using physical description which includes a 50 ft. height with 2:1 sideslopes:

= 19390 cu. yd.

This would score an 8 by the HRS.

Based on the above, I have assigned a score of 8 for the waste quantity.

Facility name: MANUILLE SITE
Location: WACKECAN, ILLINOIS
EPA Region:
,
Person(s) in charge of the facility: NORM NIEDERGANE, ON-SCENE
COORDINATOR
Name of Reviewer: Norm NIEDERGANG Date: Nov. 24, 1982
General description of the facility:  (For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the
facility; contamination route of major concern; types of information needed for rating; agency action, etc.)
FANDFILL BORDERING LAKE MICHIGAN ON
MANVILLE PROPERTY INTO WHICH IS PLAYED
BOTH FRIABLE AND CONSOLIDATED ASBESTOS
AND OTHER MANUFACTURING WASTES, THE
LANDFILL HAS BEEN IN USE SINCE ABOUT
1920.
·
Scores: S <sub>M</sub> = 31.62(S <sub>gw</sub> = 4.33' S <sub>sw</sub> = 8,58' S <sub>a</sub> = 53,85)
S <sub>FE</sub> = O
S <sub>DC</sub> = 37.50

FIGURE 1 HRS COVER SHEET

	Ground Water Route Work Sheet										
	Rating Factor	Multi- plier	Score	Max. Score	Ref. (Section)						
1	Observed Release		<b>©</b>	45	1	0	45	3.1			
1	If observed release is given a score of 45, proceed to line 4.  If observed release is given a score of 0, proceed to line 2.										
2	Route Characterist Depth to Aquifer		0 1 2 (3	<b>)</b>	. 2	6	6	3.2			
	Concern Net Precipitation Permeability of t	he	0 ① 2 3 0 1 2 ③	)	1	1 3	3 3				
	Unsaturated Zo Physical State	ne 	0 1 ② 3		1	2	3				
			Total Route Charac	teristics Score		12	15	•			
3	Containment		0 1 2 3	)	1	3	3	3.3			
4	Waste Characteristics Toxicity/Persistence 0 3 6 9 12 15 18 1 Hazardous Waste 0 1 2 3 4 5 6 7 8 1 Quantity						18 . 8	3.4			
	•				······································						
			Total Waste Charac	cteristics Score	)	23	26	• .			
5	Targets Ground Water U Distance to Nea Well/Population Served	rest	0 ① 2	3 8 10 20 35 40	<b>3</b> 1 .	30	9 40	3.5			
			Total Target	s Score	<del></del>	3	49	}			
6	If line 1 is 45, If line 1 is 0, n			<b>(</b> 5)		2484	57,330				
7	Divide line 6 b	y 57,330	and multiply by 100		s <sub>gw</sub> -	4.3	3				

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet										
Rating Factor	Assigned Value (Circle One)	Score	Max. Score	Ref. (Section)						
1 Observed Release	(i) 45	.1	0	45	4.1					
I .	en a value of 45, proceed to line 4. en a value of 0, proceed to line 2.				.4					
2 Route Characteristics			_		4.2					
Facility Slope and Interv Terrain	ening (0) 1 2 3	. 1	0	3						
1-yr. 24-hr. Rainfall Distance to Nearest Sur Water	0 1 ② 3 face 0 1 2 ③	1 2	2	3 6						
Physical State	0 1 ② 3	1	2	3						
	Total Route Characteristics Score		16	15						
3 Containment	0 1 ② 3	1	2	3	4.3					
Waste Characteristics Toxicity/Persistence Hazardous Waste Quantity	18 5	18	4.4							
•			•							
	Total Waste Characteristics Score		23	26						
Surface Water Use Distance to a Sensitive Environment Population Served/Distato Water Intake Downstream	0 1 2 3 0 1 2 3 ance 0 4 6 8 10 12 16 18 20 24 30 32 35 40	3 2	6 6 0	9 6 40	4.5					
	Total Targets Score		17	55						
6 If line 1 is 45, multiply If line 1 is 0, multiply	y 1 x 4 x 5 2 x 3.x 4 x 5		5520	64,350						
Divide line 6 by 64,35	0 and multiply by 100 ·	S 5W =	8.58							

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet											
Rating Factor	Assigned Value (Circle One)	Score	Max. Score	Ref. (Section)							
1 Observed Release	0 45	1	45	45	5.1						
Date and Location: 4/28	182 UPWIND, MIDSITE	- AND	DOWNE	WINT	,						
1	HR SAMPLES COLLECT ATTONS ON 37 MM TALYSED BY ELECT	CTED A	TELTER	30VE 25 , Ti	4EN						
If line [1] is o, the Sa -	O. Enter on line 5. Occeed to line 2.	TRON N	MICROS	copy.							
Waste Characteristics Reactivity and	<b>(</b> ) 1 2 3	1	0	3	5.2						
Incompatibility Toxicity Hazardous Waste Quantity	0 1 2 3 4 6 6 7	3 7 8 1	9.5	9 8	•						
	•			•							
1	Total Waste Characteristics Sco	ore	14	20							
3 Targets * Population Within	0 9 12 15 18	1	21	30	5.3						
4-Mile Radius Distance to Sensitive Environment	(23) 24 27 30 0 1 2 (3)	2	6	6							
Land Use	0 1 2 (3)	1	3	3							
			•		••						
			•								
	Total Targets Score		30	39							
4 Multiply 1 x 2 x	3	-	18900	35,100							
5 Divide line 4 by 35,10	00 and multiply by 100	Sa-	- 53,85	•							

,这是一个时间,这是一个时间,我们就是一个时间,他们也是一个时间,他们也是一个时间,他们也是一个时间,他们也会一个时间,他们也会一个时间,他们也是一个时间,他们

FIGURE 9
AIR ROUTE WORK SHEET

	s	s²
Groundwater Route Score (Sgw)	4.33	18.75
Surface Water Route Score (S <sub>SW</sub> )	8.58	73,62
Air Route Score (Sa)	53.85	2899.82
$s_{gw}^2 + s_{sw}^2 + s_a^2$		2992.19
$\sqrt{s_{gw}^2 + s_{sw}^2 + s_a^2}$		54,70
$\sqrt{s_{gw}^2 + s_{sw}^2 + s_a^2} / 1.73 = s_M =$		31.62

FIGURE 10 WORKSHEET FOR COMPUTING S<sub>M</sub>

		Fire a	nd	Ext	olos	ion	Wo	ork	She	et		<del>- "</del>	· · · · · · · · · · · · · · · · · · ·	
	Rating Factor			gne			e				Multi- plier	Score	Max. Score	Ref. (Section)
1	Containment	1					3				1		3	7.1
2	Waste Characteristics Direct Evidence Ignitability Reactivity Incompatibility Hazardous Waste Quantity	•	1 1 1		3 3 3 3	4	5	6	7	. 8	1 1 1 1		3 3 3 3 8	7.2
		Total Was	te	Cha	ırac	teri	stic	s S	Scor	е е			20	
3	Targets Distance to Nearest	0	1	2	3	4	5				1		5	7.3
	Population Distance to Nearest	0	1	2	3						1		3	
	Building Distance to Sensitive Environment	0	1	2	3		:				1		<b>3</b>	
	Land Use Population Within	0	1	2	3	4	5				1		3 5	
	2-Mile Radius Buildings Within 2-Mile Radius	0	1	2	3	4	5		٠		1		5	•
<u>.</u>														
												•		••
		То	tal	Tar	get	s S	core	 ;					24	
4	Multiply 1 x 2 x	. <del>.</del> 3											1,440	
5	Divide line 4 by 1,440	and multiply	y b	y 10	00			•			SFE -		<u> </u>	I

FIGURE 11 FIRE AND EXPLOSION WORK SHEET

			Direct Conta	act Work Sheet				
	Rating Factor		Assigned Value Mult (Circle One) plie				Max. Score	Ref. (Section)
1	Observed Incident		0	45	1	0	45	8.1
	If line 1 is 45, proc If line 1 is 0, proce							
2	Accessibility		0,12		,1	: 3	3	8.2
3	Containment		0 (15)		1	15	15	B.3
4	Waste Characteristics Toxicity		0 1 2 6	D	5	15	15	8.4
5	Targets  Population Within a  1-Mile Radius	•	0 1 2 (3		4	12	20	8.5
	Distance to a Critical Habitat	•.	<b>(</b> 0) 1 2 3		4	0	12	:
	•			•	•			
		••					•	•
					•			
			Total Targe	ts Score		12	32	
6	6 If line 1 is 45, multiply 1 $\times$ 4 $\times$ 5  If line 1 is 0, multiply 2 $\times$ 3 $\times$ 4 $\times$ 5							
7	Divide line 6 by 21,	600 and mi	ultiply by 100		SDC -	37.5	0	

FIGURE 12 DIRECT CONTACT WORK SHEET

### DOCUMENTATION RECORDS FOR HAZARD RANKING SYSTEM

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: JOHNS - MANVILLE

LOCATION: WALKEEAN ILLINOIS (51)2 SEC 10 R45N T23E)

THE WASTE DISPOSAL AREA IS LOCATED ON AN AREA NOTE: WHICH HAS BEEN BUILT UP BY WASTES" ACCUMULATING SINCE ABOUT 1920 TO A HEIGHT OF APPROXIMATELY 50 to 60 FT. ABOVE THE NATURAL GROUND SURFACE. THEREFORE ANY CITED REFERENCE WHICH DISCUSSES "LANDFILL" DE "LANDFILLED AREA" IS ACTUALLY REFERING TO THE AREA WHICH HAS BEEN FILLED FROM THE NATURAL BROUKD SURFACE UP TO A HEIGHT OF 50 TO COFT, TO THE BEST OF MY ESTIMATION, NO LANDEILLING HAS EVER OCCURED BELOW THE NATURAL GROUND SURFACE. THERE FORE A MORE CORRECT WAY TO DESCRIBE THE METHOD OF DISPOSAL AT THIS SITE IS "WASTE PILE" FURTHERMORE, CURRENT DISPOSAL OF FRIABLE ASBESTOS OCCUPD IN AN EXCAUNTED PIT ABOUT 150 FT. IN DIRMETER AND APPROXIMATELY 50 FT DEEP : FROM THE TOP OF THE BUILT UP AREA TO THE NATURAL GROUND SURFACE.

\* WASTES PREDOMINATELY ROCFING PARER - SHINGLE, PARTICLE
BOARD AND INSULATION PROCESSES WHICH WAS DEFECTIVE. HOWEVER

#### GROUND WATER ROUTE

#### 1 OBSERVED RELEASE

Contaminants detected (5 maximum):

- NO DOCUMENTED

RELEASE -

Rationale for attributing the contaminants to the facility:

2 ROUTE CHARACTERISTICS

# Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

GRONDWATER DISCHARGE ZONE (C-50 FEET BELOW NATURAL GROND TURFACE)

(LETTER FROM ILLINGIS STATE GEOLOGICAL EURNEY TO ROBERT WENGROW DATED 2/23/78.)

Depth(s) from the ground surface to the highest seasonal level of the

saturated zone [water table(s)] of the aquifer of concern:

TOP OF THE ZONE OF SATURATION IS AT OR NEAR THE NATURAL GROUND SURFACE.

( SEE LETTER REFERENCED ABOVE)

Depth from the ground surface to the lowest point of waste disposal/storage:

LOWEST FORT OF WASTE DISPOSAL STORAGE IS AT THE NATURAL GROUND SURFACE (SEE PIGE THIS FORM FOR FURTHER EXPLAINATION)

### Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

MEAN ANNUAL PRECIPITATION = 32 INCHES

(FROM THE MODEL)

Mean annual lake or seasonal evaporation (list months for seasonal):

MEAN ANNUAL EVAPORATION = 30 INCHES

( FROM THE MODEL)

Net precipitation (subtract the above figures):

NET PRECIPITATION = + 2 INCHES

## Permeability of Unsaturated Zone

Soil type in unsaturated zone:

SURFICIAL BEACH SAND WHICH IS DENSE AND MEDIUM GRANED.

(FROM: LETTER FROM ILLINOIS STATE GEOLOGICAL SURVEY TO RUBERT Permeability associated with soil type: WENGROW DATED 2/23/78)

> 10-3 cm/sec.

( FROM THE MODEL AND FREEZE & CHERRY, 1979, GROUNDWATER.)

## Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

FINE MATERIAL (ASBESTOS)

(IEPA DIVISION FILE MEMO FROM MARY SCHROG-DER DATED 1/13/82

#### 3 CONTAINMENT

#### Containment

Method(s) of waste or leachate containment evaluated:

(SEE P ) OF THIS FORM FOR FURTHER EXPLAINATION OF WASTE NANAGENERS METHOD CHOSEN)
Method with highest score:

SINCE THE BUILT OF AREA IS NIKELY TO CONTAIN FRIABLE ASSET WASTE AS WELL AS CONSOLIDATED ASBESTOS WASTE MATERIAL (FROM EARLY WASTE DISPOSAL TECHNIQUES) AND THE PILES ARE NOT TOURD! WITH AN APPROPRIATE COURS MATERIAL (IS MARRIED) AND NO LINER REPORTEDLY EXISTS (I EPA DIVISION FILE HEMO FROM HARY SCHROCT WASTE CHARACTERISTICS DATED 218180) - THIS WOULD RATE A (3)

## Toxicity and Persistence

Compound(s) evaluated:

FEINDLE ASBESTOS

(MENO CITED NBOVE)

Compound with highest score:

FRIABLE ASBESTOS: TOXICITY - SAX LEVEL 3
PERSISTENCE -> HICHLY PERSISTENT; LEVEL 3

#### Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

300 TENS

Basis of estimating and/or computing waste quantity:

FACILITY'S PART A RORA PERMIT AFFLICATION STATES
THAT S TONS ARE PRODUCED PER YEAR. ASSUMING
THE SAME WASTE CENERATION RATE OVER THE 60 YEAR
LIFE OF THE FACILITY & GIVES A WASTE VOLUME
OF 300 TONS.

#### 5 TARGETS

### Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

NOT USED, TOUT USABLE

(LETTER FROM ISBS TO BOXELT WENDROW DATED 2/23/78)

# Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

NONE

(LETTER CITED ABOVE)

Distance to above well or building:

- NOT APPLICABLE -

## Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

NONE

COROGRAPHIC MAP; CITY OF WINCEGAN PUBLIC WORCE)

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

NONE

Total population served by ground water within a 3-mile radius:

NONE

#### SURFACE WATER ROUTE

#### 1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

- NONE

Rationale for attributing the contaminants to the facility:

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain \*

Average slope of facility in percent:

VARIES CONSIDERABLY HOWEVER, SLOPE FROM TOPOS SITE TO NATURAL GROUND LEVEL IS > 890.

(ON-SITE INSPECTION OBSERVATIONS BY ECOLOGY & ENVIRONHEUT, INC-EN PICTURES INCLUDED Name/description of nearest downslope surface water:

LAKE MICHIGAN

Average slope of terrain between facility and above-cited surface water body in percent:

~ 15H/800 TO 1000FT = 1.5% TO 1.9% SLORE

(ON-SITE INSPECTION) OBSERVATIONS BY ECOLOGY & CHUIRONHANT, INC - FIT AND TORD MAP HEADDENCHT)

Is the facility located either totally or partially in surface water?

NO

(ON-SITE INSPECTION BY ECOLOGY; ENVIRONMENT, INC (FIT))

6

\* BASED ON DISCUSSION WITH DON WOODS (FIT)

Is the facility completely surrounded by areas of higher elevation? NO

# 1-Year 24-Hour Rainfall in Inches

BETWEEN 2.0 TO 2.5 INCHES

(FROM MODEL)

Distance to Nearest Downslope Surface Water

<1000 FT.

(MEA SUPERENT FROM TOPO HAP)

Physical State of Waste

FINE MATERIAL (FRIABLE ASBESTOS)

(SEE P. 3 OF THIS FORM FOR REFERENCE)

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

REJUG STEAW

(SEE P. 1 OF THIS FORM FUR FURTHER EXPLAINATION OF WASTE MANAGEMENT METHOD CHOSEN)

Method with highest score:

SINCE THE BUILT UP AREA IS LIKELY TO CONTAIN FRIABLE
ASPESTOS WASTE AS WELL AS CONSOLIDATED ASBESTOS
WASTE HATFRIAL (FROM EARLY WASTE DISPOSAL TECHNIQUES
AND THE PILES ARE NOT COVERED WITH AN
APPROPRIATE COVER MATERIAL (ie-EARTHEN MATERIAL)
AND THE CONTAINMENT | DIVERSION SYSTEM IS POTENTIAL
WISOUND (INADEQUATE COVER OF BUILT UP AREA) - THIS
WOULD RATE A Q.

(IEPA LETTER FROM JOE PETRILLI TO J-M CORP. DATED 1/9/77)
AND

(IEPA DIVISION FILE MEMO FROM MARY SCHROEDER DATED 1/13/8

#### 4 WASTE CHARACTERISTICS

## Toxicity and Persistence

Compound(s) evaluated
FRIABLE
ASBESTOS

- SEE PHOF THIS FORM -

Compound with highest score:

FRIABLE ASBESTOS

## Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of O (Give a reasonable estimate even if quantity is above maximum):

300 TONS

Basis of estimating and/or computing waste quantity:

- SEE P. 4 CF THIS FORM -

5 TARGETS

#### Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

RECREATION - FISHING, BOATING, SWIMMING, ELC

Is there tidal influence?

- NOT A PPLICABLE -

## Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

-NOT APPLICABLE -

Distance to 5-acre (minimum) fresh-water wetland, if I mile or less:

WETLANDS IMMEDIATELY ADJACENT TO SITE (LICOFT.)

( TOPO MAP - WANCEGAN GUAD)

Distance to critical habitat of an endangered species or national wildlife refuge, if I mile or less:

NONE KNOWN

#### Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

NONE

NOTE: INTAKE LOCATED SEC. 22, T45N, R23E IS ONLY
USED 1-2 DAYS A YEAR AND ACCORDING TO
THEREFORE
BOB BARTHOLOMEW (FIT) ISANOT REPRESENTATIVE
OF THE WATER SUPPLIED TO THE POPULATION ON
A DAY-TO-DAY BASIS.

INTAKES SERVING THE POPULATION ARE WELL OUTSIDE THE 1-MILE PERSCRIBED PADIOS (STATIC WATER BODY)

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

NONE

Total population served:

NONE

Name/description of nearest of above water bodies:

LAKE MICHIGAN

Distance to above-cited intakes, measured in stream miles.

SURFACE WATER

INTAKE LOCATED JUST OVER 4 MILES DOWNSTREAM

(DIRECT MEASUREMENT - TOPO MAP, WAUCEGAN GUAD)

#### AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

ASBESTOS

Date and location of detection of contaminants

4/28/82 UPWIND, MIDSITE, AND DOWNWIND SAMPLES

Methods used to detect the contaminants:

8-HOUR SAMPLES COLLECTED AT ABOVE LOCATIONS ON 37 mm.

MCE FILTERS THEN ANALYZED (FIBER COUNT) BY ELECTRON

MICROSCOPSY.

Rationale for attributing the contaminants to the site:

CHOWN ASBESTOS DISPOSAL SITE AND NATURE OF SAMPLE COLLECTION METHOD.

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

ASBESTOS - "O" (NFPA)

Most incompatible pair of compounds:

NO INCOMPATIBLE PAIRS

Toxicity

Most toxic compound: -

FRIARLE ASBESTOS

Hazardous Waste Quantity

Total quantity of hazardous waste:

300 TONS

Basis of estimating and/or computing waste quantity:

SEE PAGE 4 OF THIS FORM

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi

0 to 1 mi

0 to 1/2 mi

0 to 1/4 mi

CITY OF WAUKEGAN ALONE 15 67, 653 FEORE ACCORDING TO THE 1980 CENSUS WHICH HAX'S THE POPULATION IN THIS PADIOS. (SHALLER PADITS' EXCLUSE THE HATOR POPULATION AREAS AND WOULD RESULT IN AND OVERALL LOWER STORE.) - FROM TOPO HAP - WAUCCOAN BUND. AND

Distance to a Sensitive Environment

CITY OF WAUKEGAN PLANNING PEPT. -

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

NOT APPLICABLE

Distance to 5-acre (minimum) fresh-water wetland, if I mile or less:

SEE p. 9 OF THIS FORM

Distance to critical habitat of an endangered species, if I mile or less:

NONE KNOWN

#### Land Use

Distance to commercial/industrial area, if 1 mile or less:

INDUSTRIAL AREA ADJACENT (L'14 MILE)

(ACRIAL PHOTO'S; TOPO HAP-WAUKEGAN OURD)

Distance to national or state park, forest, or wildlife reserve, if 2 \_ miles or less:

ILLINDIS BEACH STATE PARE ADJACENT ( LILY HILE)

( TOPO HAP - WAUKEGAN QUAD)

Distance to residential area, if 2 miles or less:

RESIDENTIAL AREA (14-1/2 MILE)

(TOPO MAP - WAUKEDAN OURD)

Distance to agricultural land in production within past 5 years, if 1 mile or less:

NONE

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

NONE

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

NONE

•	- 05	
	-	•
T24T409	DIRECT	

141

[3]

[2]

Thousand Described

- NONE DOCUMENTED -

ACCE 351 BILITY

REPERT CAN WOODE (FIT - SHC INSPITCH) TEAN HEHBED) BAPPIELE

AROUND SHE FORS NOT EXTEND ALONG THE GUTIRE EASTCRIP (LOCE

OF THE SHE CHARSING) AND ACCESS 21 2531BLE FROM THAT SIDE

CONTRINMENT

PILES, NOT COVERED WITH PROPER COVER SUSPECT TO HATERIAL CIE SUSPECT TO CONTRINGUE TO EARLY

WASE CHARRETON TO TO INVIOLEY

VIOLEN

VIOLE

TRIABLE ASBESTOS -- SAX LEVEL 3

(TOTALLE WAS TESMY) ASEA MISTERIONI D. (ZUICAG ZUIM-1) COTALGOF (TESMY) AAPA JAITUSCIES ASIONARIO (ZUICAG ZUIM-1) COTALGOF ATOMICA COSTALINA DIOSENS COMP MITTER DOOG - DOO! : JATOT! ( SAH ONOT ( 2'OTOMG JAIDEN )

PISTÁNCE TO A CRITICAL HABITAT:

KE KHONN ENDWOEBED SECIES